







Energy Policy Update

Energy and Environmental News

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ARIZONA

8 Marana Schools Are Going Solar

[Arizona Daily Star, July 11] Construction crews are fitting eight Marana Unified School District schools with solar panels that will fill most of the facilities' electrical needs and drastically cut the district's utilities costs. The panels are being installed at no cost to the district, and are expected to generate as much as 80 percent of each campus's electricity needs. The panels are going up at Estes, Ironwood, Quail Run, Coyote Trail, Twin Peaks, and Butterfield Elementary Schools, as well as Marana Middle School and MCAT High School. The work at Estes, Marana Middle and MCAT started in May and is scheduled to finish before school begins on Aug. 5. The rest of the work started in early June and will conclude in September. District spokeswoman Tamara Crawley said the district hopes to acquire the technology for its nine other schools as resources become available. It chose the current schools based on various factors, such as current infrastructure and campus layout. Once it chose the schools, the district looked for aesthetically pleasing and functional places for the panels, installing them in areas in need of shade, such as parking areas and playgrounds. Crawley said the community has embraced the project.

APS to Bring Two Net Metering Plans to State Regulators

[Phoenix Business Journal, July 11] [Arizona Public Service Co.](#) has developed two plans for the way it compensates solar owners for generating excess electricity, each of which could result in significantly less savings for customers using the technology.

APS' plans for net metering, the process by which solar owners are paid for producing power, would add new fees in one option and do away with the entire net metering process in another. Both options rely on more up-front incentives to solar buyers to buffer the payments it would be lowering. The move also wouldn't impact anyone already owning a solar system, but would effect new solar installations, likely after October. "Either approach would ensure that rooftop solar customers get a fair price for the power they generate and a fair price for their use of the grid," said John Hatfield, vice president of communications for APS. Solar companies were unmoved by the proposals, which they say would essentially end the rooftop installation and generation market in Arizona. "APS masquerading as a ratepayer advocate is like Bernie Madoff masquerading as the tooth fairy," said Bryan Miller, vice president of public policy and power markets for Sunrun, the California company that provides financing for Arizona solar installations. The filings will throw some of the potential changes to the ACC, which will have to decide what, if any incentives, would be required as APS has already met its mandated residential rooftop installations quota until 2016. The plans would not affect commercial solar customers because APS officials said they are covering their share of using the power grid.

APS Seeks Higher Bills For New Solar Customers

[Arizona Republic, July 11] Arizona Public Service Co. is proposing charging customers who install rooftop solar panels \$50 to \$100 or more a month to cover the cost of maintaining the power grid. The request will be filed with the Arizona Corporation Commission on Friday and will kick off a months-long period of review by regulators, who will ultimately decide whether or not to approve the policy change. Their final decision could impact the future of rooftop solar in Arizona. The rooftop-solar industry, including companies that lease solar panels, argues that any changes in solar policies will kill demand for the services and crush a burgeoning industry. APS officials said solar customers are not paying enough for the services they get from the power grid, which enables them to get electricity at night when solar panels don't generate power and balance their household energy needs during the day when their solar-panel output and home demand don't match up. The change would only affect new solar customers, not those that already have solar on their homes, and would significantly reduce the savings associated with generating power using rooftop systems.

ASU-Led Algae Cooperation to Host Algae Workshop

[ASU News, July 10] The Arizona Center for Algae Technology and Innovation (AzCATI), housed at the Arizona State University Polytechnic campus, will help to host the second of ongoing, cutting-edge algae training workshops in August on the University of Texas at Austin's campus. Following a successful inaugural training workshop on the ASU Polytechnic campus in Mesa, the Algae Testbed Public-Private Partnership (ATP3) will once again open its doors to the algae community for a hands-on, interactive algae workshop. From Aug. 19-23, participants will have a chance to get their hands green as they study Algal Culture Management and Strain Selection. ATP3 is a network of open testbeds and evaluation facilities which aim to facilitate innovation, empower knowledge creation and accelerate growth of the emergent algal energy industry. In May, ATP3 specialists hosted a full class of algae researchers and scientists from around the globe for the first of many workshops. See what the participants are saying about the workshops in a [video here](#).

BLM Chooses SunZia Route

[Energy Prospects West, July 9] BLM issued a final environmental impact statement in June for the proposed SunZia Southwest transmission line that would stretch from New Mexico across southern Arizona, following through on a commitment made two years ago to the Obama administration to expedite the project. Environmental groups and others who oppose SunZia are considering their options to stop the project, which would consist of two 500-kV lines from Lincoln County, N.M. to Pinal County, Ariz. Of particular concern in Arizona is the San Pedro Valley in the southeastern part of the state. BLM "chose a preferred alternative that will cause significant environmental damage to the San Pedro River Valley," an area which "has long been a key conservation area and is currently being considered for additional protections by the U.S. Fish and Wildlife Service," said Sandy Bahr of the Sierra Club's Grand Canyon chapter in a press release. The Wilderness Society and the Natural Resources Defense Council put out a statement that said the impacts to wildlife habitat and corridors and migratory flyways along the San Pedro River "would be significant" and that "these are the kind of critical natural resources that we need to avoid when planning for and building renewable energy projects."

EPA Extends Public Comment Period on Navajo Power Plant

[Phoenix Business Journal, July 9] The U.S. Environmental Protection Agency is extending the public comment period by 60 days on proposed emissions regulations of a [Salt River Project-owned](#), coal-fired power plant near the Arizona-Utah border. The EPA is considering new rules aimed at reducing emissions and other pollution from the Navajo plant. But some Arizona business, energy and tribal interests say the plant and the coal mine that supplies it could close as a result, costing jobs in a remote part of the state. They also worry that increased regulation or a closure could drastically increase water rates. The coal-fired plant is located near Page, within the Navajo Nation. It is owned and managed by SRP, but also provides electricity and water pumping energy for the Central Arizona Project canal.

Study Shows SC County Ripe for Solar Projects

[Nogales International, July 9] While the blazing sunshine may be an annoyance to local residents during the hot summer months, it has the potential to power thousands of Santa Cruz County homes. The county has a number of highly suitable sites for utility-scale solar projects, according to the results of a study presented by Mark Apel of the University of Arizona Cooperative Extension at the Santa Cruz County Board of Supervisors regular meeting last Wednesday. The results of the Renewable Energy Opportunity Analysis, conducted last year in Pima, Cochise, and Santa Cruz counties, mapped out suitable sites for solar energy production and can serve as a guide for local government officials, Apel said. "If you get any proposals coming across your desks here at the county from a solar developer, this information and this data will tell you right off the bat whether or not somebody has done their homework," he said to the board. During his presentation, Apel noted that solar projects come in a variety of shapes and sizes, but focused his comments on 5-megawatt projects, which can power up to 4,000 homes. Based on costs from two years ago, one megawatt of annual energy production needs 5-10 acres and 79,000 panels mounted on 8,000 posts at a cost of about \$23 million, Apel said, noting that costs likely have dropped since then.

US 'Falling Out of Love' with Coal Says ASU Professor

[ASU News, July 1] If Arizona decides to keep its coal plants, ASU's Mike Pasqualetti says they would have to be heavily retrofitted to curb emissions, but the state would still face intense carbon dioxide levels and natural land disturbances. In an AZCentral opinion piece, Mike Pasqualetti says Arizona can be a forerunner in the solar industry, but first, the state must decide on its coal-powered future. Pasqualetti – a senior sustainability scientist in the [Global Institute of Sustainability](#), a professor in the [School of Geographical Sciences and Urban Planning](#) and a graduate faculty member in the [School of Letters and Sciences](#) – reflects on the current debate surrounding the Navajo Generating Station in Page, Ariz. and how the coal plant symbolizes a nation moving forward with cleaner energy. Both California and Nevada are selling their shares of Navajo Generating Station energy and transitioning towards sustainable sources. "Coal is also losing momentum nationally," writes Pasqualetti. "It dropped from 50 percent in 2005 to 35 percent in 2012, driven by cheap natural gas. Fifty-two gigawatts (about 16 percent of the existing coal fleet) has been announced for retirement by 2025." Some are still very determined to rely on coal and if Arizona is to make its decision, we must measure all outcomes on a level playing field. "One thing is certain, however: If we are to continue using coal here, we will have to overcome two challenges," adds Pasqualetti. "The first challenge is to reduce air emissions. The second challenge is the competition from three alternatives: efficiency, renewables and natural gas."

ALTERNATIVE ENERGY AND EFFICIENCY

Curtailing Energy During 'Peak Power Hour' Reduces Next Year's Rates

[Energy Manager Today, July 11] Businesses may not be aware that the amount of electricity they use during the one hour of peak power demand in their region influences how much their electricity rates are adjusted up or down for a full year, according to [Joule Assets](#). For instance, in New York City, a single peak hour can determine 25 percent of a company's electric bill for 12 months. Knowing this in advance, businesses can curtail electricity use during expected peak hours through self-directed actions in order to pay less for power the next year. This week, Joule Assets launched its new Joule Peak Power Index, which forecasts when major metro areas are likely to experience the "peak power hour" of the year in their region – the one hour of highest electricity demand in each region that influences how much electricity prices are ratcheted up or down for a full year. The Joule Peak Power Index assesses total electricity expected to be consumed in each locale during peak hours of usage, forecasts the hours in each region that the peak power hour will occur, and

calculates its projected impact on metro area electricity bills. According to Dennis Quinn, COO of Joule Assets, the "peak load contribution" for an end-user is determined by the free wholesale market and passed on to any entity selling electricity to end-users. The electricity provider passes this cost on to its customers however it wants, but usually looks at each customers' peak load contribution and charges it proportionately.

More Bases Accepting Solar Power As An Energy Alternative

[AirForceTimes.com, July 9] Airmen can expect to see more solar panels throughout their bases, in their neighborhoods and even on their rooftops. Plans call for solar power to make up 58 percent of the military's renewable energy capability by 2017, according to a report released in May by the Solar Energy Industries Association. The Air Force expects to generate 1 gigawatt of renewable energy by 2016. Its goal is to have enough renewable energy to supply 25 percent of all installation electricity use by 2025, Air Force officials announced last year. With solar energy already juicing up Nellis Air Force Base, Nev., and Davis-Monthan, Ariz., and projects in the works for others, the latest project is underway at Holloman Air Force Base, N.M. Dubbed SolarStrong, the program plans to provide solar power for up to 120,000 military homes within a five-year plan across the U.S.

Renewable Energy Technology Becoming More Cost-Effective, IEA Says

[Power Engineering, July 9] Although new wind and solar power sources still require policy support to bridge the gap between the cost of generation and the market price of electricity, that situation could soon be changing, according to a report from the International Energy Agency Renewable Energy Technology Deployment. The report, which focuses on Canada, France, Germany, Japan, Norway, Sweden and Spain, notes that policies and regulations can significantly affect the business cases of renewable and nonrenewable power sources. Although government policies are currently needed to mitigate the high cost of generation for new renewable energy technologies, the report notes that the generation costs of new renewable energy technology are decreasing and approaching the costs of gas- and coal-fired plants. At the same time, the report states, the cost of gas- and coal-fired plants is increasing because of lower utilization of thermal plants, the higher capital costs of some new thermal plants and the increasing cost of fuel. The IEA-RETD also wrote emission control may be relevant, but the impact is somewhat reduced at the present.

US Reaches Milestone of 10 Gigawatt Solar Photovoltaic Capacity, According to NPD Solarbuzz

During the first half of 2013, more than 1.8 GW of new solar PV capacity was installed in the US, according to the NPD Solarbuzz North America PV Market Quarterly report.

[PRWEB, July 9] Santa Clara, CA – Solar photovoltaic (PV) installations in the US have now broken through the 10 gigawatt (GW) barrier, following strong market deployment since the start of 2010. During the first half of 2013, more than 1.8 GW of new solar PV capacity was installed in the US, according to the NPD Solarbuzz [North America PV Market Quarterly](#) report. "The US has now joined an elite group of maturing solar PV markets that have accumulated more than 10 GW of installed capacity," commented Christopher Sunsong, analyst at NPD Solarbuzz. "Only Germany, Italy, and China have more installed PV capacity than the US. The US is only the fourth country to reach the 10 GW milestone of installed PV capacity." Solar PV has been one of the fastest growing energy sources in the US over the past six years, with a compound annual growth rate of over 50% since 2007. Cumulative solar PV installations are forecast to increase an additional 80% over the next 18 months, surpassing 17 GW by the end of 2014. The rapid uptake of solar PV in the US is being driven by the dramatic solar system price declines observed since 2011. Average installed system prices in the US have declined from around \$6/watt two years ago to approximately \$4.25/watt for residential installations and \$3/watt for large utility-scale PV projects today.

ENERGY/GENERAL

EIA Launches Maps to Track Storms, Energy Disruptions

[Energy Manager Today, July 10] With peak hurricane season approaching, the US Energy Information Administration is introducing interactive maps that combine real-time data feeds from the National Hurricane Center with more than 20 map layers showing the nation's energy infrastructure and resources. The tool, which is available on the [EIA website](#), aims to allow industry, energy analysts, government decision makers, and the American public to better see and understand the potential impact of a storm. Every year, hurricanes and other extreme weather events threaten life and property. Hurricanes also affect the nation's [energy infrastructure](#), especially when storm paths traverse offshore production rigs and pipelines in the Gulf of

Mexico, coastal refineries, power plants, and energy import and export sites. Right now, the public can see the current predicted path of tropical storm Chantal, moving from the Caribbean's Leeward Islands toward the Atlantic coast of Florida. As the National Hurricane Center revises its predictions, the maps will be instantly updated. [Hurricane Sandy, which hit the eastern US in October, cut power to power to more than 8.2 million people](#) across that region. A Con Edison spokeswoman said it was the largest storm-related outage in the utility's history.

Gas Prices Seen Rising Sharply Within Days

[CNBC.com, July 11] Gasoline is expected to jump 10 to 20 cents per gallon in the next several days, as rising oil prices and peak driving season create a perfect storm for higher prices. Industry experts say gasoline prices at the pump should follow the already higher prices in the spot wholesale market. The national average at the pump Wednesday was \$3.50 per gallon for unleaded gasoline, up two cents from Tuesday's level, according to AAA's Fuel Gauge report. Prices in the spot market, which are quickly passed on to the retail market, are 30 to 61 cents higher per gallon than they were June 28, according to Tom Kloza, chief oil analyst with GasBuddy. "Even if it were to stop where it is today, we're looking at a considerably sticker shock for people at the pump," Kloza said. Retail gas prices were higher a month ago, at \$3.63 per gallon but they had fallen and were at \$3.47 per gallon last week, according to AAA. "Short-term, we're going to see the average go into the \$3.60, \$3.70 range," Kloza said. "You're looking at some markets that were closer to \$3 a gallon, like the upper Great Lakes, and they're going to go back up and be closer to \$4. Probably every market in the country has gone up at least 30 cents in the wholesale market since June 28."

Pollution Leads to Drop in Life Span in Northern China, Research Finds

[New York Times, July 8] BEIJING — Southern Chinese on average have lived at least five years longer than their northern counterparts in recent decades because of the destructive health effects of pollution from the widespread use of coal in the north, according to a [study released Monday](#) by a prominent American science journal. The study, which appears in [The Proceedings of the National Academy of Sciences](#), was conducted by an American, an Israeli and two Chinese scholars and was based on analyses of health and pollution data collected by official Chinese sources from 1981 to 2001. The results provide a new assessment of the enormous cost of China's environmental degradation, which in the north is partly a result of the emissions of deadly pollutants from coal-driven energy generation. The researchers project that the 500 million Chinese who live north of the Huai River will lose 2.5 billion years of life expectancy because of outdoor air pollution. "It highlights that in developing countries there's a trade-off in increasing incomes today and protecting public health and environmental quality," said the American member of the research team, Michael Greenstone, a professor of environmental economics at the Massachusetts Institute of Technology. "And it highlights the fact that the public health costs are larger than we had thought." Mr. Greenstone said in a telephone interview that another surprising result of the study was that the higher mortality rates were found across all age groups.

INDUSTRIES AND TECHNOLOGIES

Competition for SMR DOE Funding Heats Up

[POWERnews, July 15] Three companies vying for a \$452 million cost-sharing funding opportunity through the Energy Department to help commercialize their small modular reactor (SMR) designs made major announcements over the past weeks. The Department of Energy's (DOE's) first cost-share funding award to accelerate commercialization of an SMR design that targets a 2022 deployment date went to Babcock & Wilcox (B&W) for its mPower SMR technology. Under that agreement, the DOE will share costs on the design, certification, and licensing of the B&W mPower design, with B&W providing at least 50% of the total cost. The Tennessee Valley Authority plans to deploy two 180-MW SMR units for commercial operation in Roane County, Tenn., by 2021, and anticipates having as many as six mPower units at that site. The DOE this March issued a new cost-shared funding opportunity for SMR projects that have the potential to be licensed by the Nuclear Regulatory Commission and achieve commercial operation around 2025, while offering innovative and effective solutions for enhanced safety, operations, and performance. The competition is heating up between three companies vying for that funding opportunity: NuScale Power, of Corvallis, Ore.; Westinghouse Electric, based in Pittsburgh, Pa.; and Holtec International, based in Marlton, N.J.

Electric Vehicle Tariffs on Average 34% Cheaper than eGallon

[PR Newswire, July 8] WASHINGTON – There are currently more than 100,000 plug-in electric vehicles (EVs)

on the roads in the United States. A key factor in EVs' rising popularity is charging costs that are much lower on average than comparable gasoline fueling costs. In June, the US Department of Energy increased transparency with its launch of the "eGallon" metric, making comparisons with the price of gasoline easier. With the majority of charging done at home, EV drivers are now looking to their utilities to offer special tariffs to make EV charging even more affordable. The average national price of a gallon of gasoline was \$3.65 as of June 30th. The eGallon averaged \$1.14 per gallon equivalent across all 50 states. Electric utilities offering special EV tariffs for their customers were even cheaper at an average of \$0.93 per gallon equivalent, according to a new study published today by Northeast Group, LLC. The study United States Smart Grid: Utility Electric Vehicle Tariffs (Volume III) includes a benchmark of all utilities in the US that have launched EV tariffs. Northeast Group's benchmark found that there were 24 utilities located across 13 states offering EV tariffs. In these 13 states, the average DOE eGallon was \$1.40, but the average EV tariff cost was just \$0.93. This is a discount of 34% from the eGallon, which is based on standard electricity rates. The two states with the largest number of utilities offering EV tariffs were California and Michigan. California had six utilities offering EV tariffs, reaching more than 80% of the state's residents, and has been at the forefront of the EV market for several years. Michigan had four utilities offering EV tariffs, reaching more than 90% of the state's residents, as the state is eager to facilitate the shift for its car manufacturers from conventional vehicles to EVs.

EPRI Quantifies the Value of Hydropower in the Electric Grid

[Fierce Energy, July 12] As part of the Hydropower Grid Services Project, sponsored by the U.S. Department of Energy and co-sponsored by the hydropower industry, focused on quantifying and maximizing the benefits to transmission grids provided by conventional and pumped-storage hydroelectric plants, EPRI has released the results of its research on the performance of three conventional hydroelectric power plants. The research analyzed unit and plant performance characteristics and one-minute plant operational data from 2008, 2009, and 2010 and evaluated reductions in overall plant efficiencies under a variety of operation-related and market-related conditions for plants in the Midwest Independent System Operator (MISO) and PJM Interconnection markets and one non-market region in the Northwest. The plants were owned by two investor-owned utilities and one state power authority. The results revealed that the non-market operation of the conventional plant exhibited more efficient performance than the two conventional plants operating in established markets.

Ford Slashes \$4,000 off 2014 Focus EV Price

[LA Times, July 12] Ford Motor Co. will knock \$4,000 off the price of its 2014 Focus electric cars, slated to hit dealers' lots in a few weeks. With destination charge included, the base model will now cost \$35,995. In a statement Thursday, a company spokeswoman said the lowered price of the "fully-contented" cars "keeps us competitive in the marketplace and is an important part of our commitment to provide customers with a range of electrified vehicles to choose from." The electric Focus has lagged far behind other battery-powered competitors, selling just 177 of the 2013 model cars in June. By comparison, Chevrolet sold 2,698 Chevy Volts and Nissan's delivered 2,225 Leaf EVs. With the discount, Ford joins what's become an ongoing price war among mainstream manufacturers vying to make sure electric-curious customers come to their showrooms first.

Nanomaterial to Help Reduce Carbon Dioxide Emissions

[Science Daily, July 9] University of Adelaide researchers have developed a new nanomaterial that could help reduce carbon dioxide emissions from coal-fired power stations. The new nanomaterial, described in the *Journal of the American Chemical Society*, efficiently separates the greenhouse gas carbon dioxide from nitrogen, the other significant component of the waste gas released by coal-fired power stations. This would allow the carbon dioxide to be separated before being stored, rather than released to the atmosphere. "A considerable amount of Australia's -- and the world's -- carbon dioxide emissions come from coal-fired power stations," says Associate Professor Christopher Sumby, project leader and ARC Future Fellow in the University's School of Chemistry and Physics. "Removing CO₂ from the flue gas mixture is the focus of a lot of research. Most of Australia's energy generation still comes from coal. Changing to cleaner energies is not that straightforward but, if we can clean up the emissions, we've got a great stop-gap technology." The researchers have produced a new absorbent material, called a 'metal-organic framework', which has "remarkable selectivity" for separating CO₂ from nitrogen. "It is like a sponge but at a nanoscale," says Associate Professor Sumby. "The material has small pores that gas molecules can fit into -- a CO₂ molecule

fits but a nitrogen molecule is slightly too big. That's how we separate them." Other methods of separating CO₂ from nitrogen are energy-intensive and expensive. This material has the potential to be more energy efficient. It's easy to regenerate (removing the CO₂) for reuse, with small changes in temperature or pressure.

LEGISLATION AND REGULATION

China To Limit Car Sales in Fight Against Air Pollution

[NBC News, July 11] China, struggling to cope with worsening smog problems as roads in Shanghai and Beijing become choked with traffic, plans new restrictions on vehicle sales in some key cities. Such limits are already in place in four major cities, and another eight will be added to the list, according to reports published Thursday by China's state media. It's not clear if the expanded list will make exceptions for those buying lower-polluting battery-cars, as has been the case in the past. China is now the world's largest automotive market but the rapid growth – which neared triple digits during parts of the past decade and was running at over 9 percent on an annualized basis during the first half of 2013 – has come at a cost. Beijing and Shanghai, for example, now face some of the world's worst traffic snarls. The number of vehicles on the road in the capital city alone has jumped to 5.18 million, up more than 2 million since 2008, according to the official Xinhua news agency.

EIA Tracks State-Level Energy Efficiency Programs

[Electric Light & Power, July 11] The Energy Information Administration (EIA) compiled a nationwide inventory providing detailed summaries of energy efficiency evaluation reports — called evaluation, measurement and verification (EM&V) reports — on electricity programs. This is the first such inventory available for public use, organizing useful and timely information for energy demand analysis. Energy Efficiency Resource Standards (EERS) established by states have joined other regulatory and policy measures as a primary driver of energy efficiency programs in the U.S. At the end of 2012, electric utilities in states having active EERS legislation served 104.6 million electric customers. As states and other entities ramp up incentive programs for enhancing energy efficiency, the effect of these incentives and their EM&V is critical to assessing program cost effectiveness. To some extent, the implementation of EERS follows the renewable portfolio standards (RPS). In general, energy-related state legislation is an active field, with more than 2,100 bills pending in the 50 states, according to Colorado State University's Center for the New Energy Economy and its Advanced Energy Legislation Tracker.

House Bill Cuts Renewable Energy Budget

[Associated Press, July 10] The House on Wednesday voted to slash money for renewable energy research and defy the Obama administration's decision to close the Yucca Mountain nuclear waste repository in a bare-bones annual spending bill for energy and water programs. The Republican-crafted bill has little support in the Democratic-led Senate and faces a White House veto, but makes clear the stark divisions over policy as Congress and the White House look toward an autumn showdown over spending, taxes and the debt ceiling. The bill, which passed 227-198, approves \$30.4 billion for Energy Department programs, Army Corps of Engineers projects and Energy Department nuclear weapons maintenance for the budget year beginning in October. That's \$2.9 billion below what was enacted for 2013, before the automatic cuts or sequestration kicked in, and \$4.1 billion below what President Barack Obama asked for in his budget proposal. It is one of the 12 spending bills Congress is supposed to pass every year to pay for the operations of 15 Cabinet departments and other federal agencies. The Senate Appropriations Committee has approved a \$34.8 billion energy and water bill.

Options in LEED Address Challenges Posed by European Built Environment

[Sustainable Cities Network, July 9] WASHINGTON, D.C. -- In an effort to accelerate sustainable development around the world, the [U.S. Green Building Council](#), creators of the LEED Green Building Rating System, have added Alternative Compliance Paths for LEED projects in Europe. ACPs are a tool that allows LEED to be more flexible and applicable for a range of building projects across the globe. The first round of ACPs, tailored for Europe, will provide global consistency and new pathways for projects to demonstrate compliance. ACPs provide additional options or approaches to LEED credits that address unique project needs and advancements in science and technology. Europe was selected as a starting point due to LEED's growth in the region and use of the LEED Existing Buildings and Operations Maintenance rating system. USGBC also plans to announce LEED ACPs for Asia and South America in the near future.

Renewable Energy Standards Hold Steady and Expand in 2013 State Legislative Sessions

[Colorado Energy News, July 9] At the beginning of the 2013 legislative session, there were efforts in several states to roll back state renewable energy generation standards. Those efforts appear to have failed, according to the Center for the New Energy Economy at Colorado State University. While more than 30 states voted on or considered legislation this session to change their Renewable Portfolio Standards (RPS), only eight have enacted modifications or increases to existing policies and no state has rolled back an existing standard to date. The Center for the New Energy Economy's Advanced Energy Legislation Tracker database (www.aeltracker.org) contains a comprehensive inventory of over 2,300 state advanced energy bills including the 121 bills that would have increased, modified or decreased RPS policies this year. Of those 121 introduced bills, 16 have been enacted, none of which would repeal or delay RPS statutory requirements or generation deadlines. "Despite attempts to roll back state renewable energy policies this year, the net impact thus far in the 2013 session is that the U.S. renewable energy market is stronger, particularly in the three states that increased their RPS standards – Nevada, Colorado and Minnesota," said Bill Ritter, Jr., director of the Center. "States are clearly defending their RPS policies and in some cases, increasing them."

U.S., China Agree on Climate Change Actions

China and the U.S. have agreed on five areas in which the two countries can address climate change, according to the U.S. Department of State. The climate initiatives include carbon capture and storage, boosting energy efficiency in buildings, deploying renewable energy and investing in smart grid technologies. The initiatives were developed by the U.S.-China Working Group on Climate Change. The Working Group was established pursuant to the Joint Statement on Climate Change issued on April 13, 2013 during Secretary of State John Kerry's first trip to China.

WESTERN POWER

California Solar Installations Jumped 26% in 2012

[LA Times, July 11] California had a banner year in solar installations in 2012, bringing the state 391 megawatts closer to its goal to install 3,000 megawatts by 2017. According to a California Solar Initiative progress report by the Public Utilities Commission, those additions represent a 26% growth from 2011. The state is now equipped to produce 1,629 megawatts of solar energy across completed projects at nearly 168,000 sites -- enough to power 150,000 homes. Evan Gillespie, a deputy director with the Sierra Club's Beyond Coal Campaign, said the progress was significant. "We had our largest year ever for rooftop solar with nearly 400 megawatts. That's more than most states have to date," he said. "That in itself is critical."

How Much Oil Does Texas Produce? More Than Entire Countries

[Dallas Business Journal, July 11] Texas oil producers pulled more oil out of the ground than many countries in recent months, putting it in the ranks of such powerhouses as Kuwait and Venezuela. The latest numbers show Texas produced 74 million barrels of oil in March and 73 million barrels of oil in April, more than double the output per month from 2009, according to the [Energy Information Administration](http://www.energyinformationadministration.gov). If Texas were a country, it would rank 15th in the world in terms of oil production, according to FuelFix.com. That's thanks in large part to the Eagle Ford Shale and Permian Basin where drillers use horizontal drilling hydraulic fracturing to pass through the shale formations and free the oil.

Review Released for TransWest Power Line

A [draft environmental](#) review for a proposed 725-mile, 3,000-megawatt electrical transmission line that would stretch across four states suggests deviating from the route that the Denver company building the line wants in Wyoming. The Bureau of Land Management and the Western Area Power Administration released the draft review of the [TransWest Express LLC](#) transmission line Wednesday. It considers impacts to the environment, people and cultural resources. In Wyoming, the federal agencies proposed shifting the route to avoid hurting views and the greater sage grouse, a bird that is threatened to be listed under the Endangered Species Act. The overall proposed route would start near Sinclair and end near Boulder City, Nev. Transmission lines would also go through Colorado and Utah.

San Diego May Build 500 Megawatt Reservoir Hydroelectric Plant

[Bloomberg, July 8] The San Diego County Water Authority and the City of San Diego are considering

building a 500-megawatt hydroelectric power plant to offset shuttered nuclear power capacity. The proposed project would increase the amount of water in the San Vicente Reservoir and would be completed after more than five years, the public agency said today in a statement. The new plant would help make up for the capacity lost when Edison International (EIX:US)'s Southern California Edison decided to permanently close the San Onofre Nuclear Generating Station that closed in January 2012, Frank Belock, a deputy general manager at the Water Authority said today in an interview. It would be the Water Authority's second plant to pump water up into the reservoir from a smaller one below, mainly at night when power rates are low, he said. The Water Authority has put out a request for proposals to do an economic and financial study that should cost less than \$150,000 and determine the project's cost and the best ownership structure.

SONGS Closure Prompts Look Into Hydroelectric Power

[Power Engineering, July 9] The San Diego County Water Authority has offered a request for proposals for a pumped storage hydroelectric power project at the San Vicente Reservoir to help with power supply after the closing of the San Onofre Nuclear Generating Station (SONGS). The RFP seeks firms that could perform a feasibility study on the economic and financial requirements of a pumped storage project. The proposed project could generate between 240 and 500 MW. It would require the construction of a small reservoir along with other facilities. Power would be generated during peak-demand periods by allowing water to flow downhill in a tunnel from the upper reservoir and turn turbines before entering the San Vicente Reservoir. Water would be pumped back uphill during off-peak periods. The initial assessment is expected to cost less than \$150,000 and be completed next spring. Construction likely would take at least five years. It would be done in partnership with the city of San Diego, which owns San Vicente Reservoir.

Study: Geothermal Power Near Salton Sea Setting Off Quakes

[The Desert Sun, July 12] A scientific study released Thursday found that geothermal energy plants near the Salton Sea have triggered thousands of small earthquakes and that the intensity of those quakes has been proportional to the amounts of water injected and extracted in the process of producing energy. UC Santa Cruz researchers Emily Brodsky and Lia Lajoie studied records of earthquakes and the amounts of water pumped from the ground and injected back into the ground at geothermal plants on a monthly basis between 1981 and 2011. The plants in the Salton Sea Geothermal Field pull hot water from deep underground, and use steam to run turbines and generate electricity. Much of the steam is recaptured and then that portion of the water is injected again to produce more steam. "We see that when they pump a little bit of extra water out of the ground relative to what they put in, then that results in a few more earthquakes, and when they do a little bit less, that results in a few less earthquakes," Brodsky said in a telephone interview. The journal Science published the study online Thursday. Brodsky, a geophysics professor, said the research determined that for every half a billion gallons of water that was removed from the ground and not put back, an average of one detectable earthquake resulted every 11 days, many of them tiny quakes.

Western Governors Roll Out '10-Year Energy Vision,' a Regional Consensus on Energy Policy

[Western Governors' Association, July 2] Western Governors unveiled a **10-Year Energy Vision**, which lays out overarching goals for Western energy policy, at the WGA's 2013 Annual Meeting (June 28-30) at the Montage Deer Valley in Park City, Utah. The "10-Year Energy Vision" provides a comprehensive approach to energy policy, from fossil fuels to renewables, as well as a focus on energy efficiency, environmental protection and education. Utah Gov. Gary Herbert, the WGA Chairman, spearheaded the year-long energy project with his WGA colleagues that produced "10-Year Energy Vision" and its companion documents, "The State of Energy in the West" and "Energy Perspectives." "The 10-Year Energy Vision represents a consensus from states with very different resources and policy stances," said Gov. Herbert. "It was truly a bipartisan effort that includes the perspectives of all the governors." The Western Governors' "10-Year Energy Vision" contains six energy goals on which the governors all agree. Some of the goals include: achieving energy security; generating clean, affordable and reliable energy from a diversified portfolio of energy sources; increasing energy efficiency, and protecting wildlife, the environment and natural resources.


Wyoming Wind Inches Closer to Western Markets

[Energy Prospects West, July 9]The Bureau of Land Management and the Western Area Power Administration on July 3 released the draft environmental impact statement for the proposed TransWest Express Transmission Project, a \$3-billion transmission line that would link Wyoming wind energy with load centers in the Desert Southwest. The release of the 2,000-page document, which took nearly four years to

complete, lays out the agencies' preferred alternative routes for the 725-mile project that would stretch a 600-kV, direct-current line from south-central Wyoming to the Eldorado Valley electric complex near Hoover Dam in Nevada. The proposed line would have a capacity of 3,000 MW. The draft EIS carves the project's route into four sections with BLM's "preferred alternative route" following mostly designated utility corridors, especially the West-wide Energy Corridor that runs through 11 western states. About 490 miles of the preferred route runs through federal land, and another 188 miles cut through private property with 43 miles located on state lands.

ARIZONA STATE INCENTIVES/POLICIES


ARIZONA COMMERCE AUTHORITY (ACA)


 **Angel Investment Tax Credit Program** - The main objective of the Angel Investment program is to expand early stage investments in targeted Arizona small businesses. The program accomplishes this goal by providing tax credits to investors who make capital investment in small businesses certified by the Arizona Commerce Authority (ACA). To view the list of businesses that have been certified under this program please [click here](#).


Income Tax Credit Provisions

An investor seeking an income tax credit must document to the ACA the investment was made in either a qualified rural or bioscience company or any other qualified small business. For a qualified bioscience or rural company, the tax credit may total up to 35% of the investment amount over three years; for any other qualified business, the tax credit may total up to 30% over three years. If the tax credits exceed the investor's income tax liability, any unused tax credit amount may be carried forward for up to three taxable years as long as the investor timely claims the credits with Revenue.


The ACA may authorize up to \$20 million in tax credits to qualified investors beginning July 1, 2006 through June 30, 2016. The tax credits will be authorized on a first come, first served basis, which is established by the date and time the investor files an application with the ACA. Download the Angel Tax Credit Allocation Table [Angel Tax Credit Allocation Table](#) to view the remaining amount of tax credits available. For more detailed information please see below or direct questions to the Program Manager.

 **Arizona Innovation Accelerator Fund** - The Arizona Innovation Accelerator Fund Program is an \$18.2 million loan participation program funded through the U.S. Department of Treasury's SSBCI and managed by the Arizona Commerce Authority. The goal of this program is to stimulate financing to small businesses and manufacturers, in collaboration with private finance partners, to foster business expansion and job creation in Arizona.


 **Arizona Innovation Challenge** - The Arizona Innovation Challenge is an investment in the minds of talented entrepreneurs in Arizona and around the world. The ACA will award \$1.5 million to the most promising technology ventures that participate in the Challenge (awards may range from \$100,000 to \$250,000).


 **AZ Fast Grant** - Technology Commercialization Assistance - ***Next round of grants opening in mid November. This*** competitive grant enables Arizona-based technology companies to initiate the commercialization process. The grant will pay up to \$7,500 to provide one or more of the following professional consulting services:


- An expert review of the technology under development to determine if it already exists, is a good candidate for intellectual property protection and is likely to find an attractive market.
- A commercialization feasibility study to identify showstoppers to commercialization before resources are spent commercializing a technology that is unlikely to succeed.
- Other commercialization assistance such as training or preparation for the submission of a federal SBIR/STTR grant application or another acceptable means of technology commercialization.


 **AZ Step Grant** - Grant funding from the U.S. Small Business Administration (SBA) with matching


funds contributed by the Arizona Commerce Authority (ACA) offering a number of services and tools to Arizona small businesses as they go global for the first time with sales or enter new, international markets.


 **Commercial/Industrial Solar Energy Tax Credit Program** - The primary goal of the Commercial/Industrial Solar Energy Tax Credit Program is to stimulate the production and use of solar energy in commercial and industrial applications by subsidizing the initial cost of solar energy devices. The program achieves this goal by providing an Arizona income tax credit for the installation of solar energy devices in Arizona business facilities. For more detailed information please see below or direct questions to the Program Manager.

 **Healthy Forest** - Harvesters, initial processors and transporters of small diameter timber, may receive: Transaction Privilege Tax Exemptions, Use Tax Exemption and New Job Income Tax Credits.

 **Job Training Program** offers job specific reimbursable grants for employers creating new jobs or increasing the skill and wage level of their current employees. Deadline: Year Round


 **Renewable Energy Tax Incentive Program** offers a refundable income tax credit and property tax reduction to companies in solar, wind, geothermal and other renewable energy industries who are expanding or locating a manufacturing or headquarters operation in Arizona. The tax credit is up to 10% of the total qualified investment amount and the property tax benefit can reduce a company's property taxes by up to 75%. Deadline: Year Round


 **Research and Development Tax Credit** is an Arizona income tax credit for increased research and development activities conducted in this state. Starting in 2010, a qualifying company may be eligible to claim a partial refund of its current year excess R&D credit. Applicants may apply at the end of their tax year but prior to filing a tax return with Revenue.


 **Quality Jobs Tax Credit Program** - Beginning July 1, 2011, this new program provides Arizona income tax credits for companies creating new jobs and investing in Arizona. The credit is valued at up to \$9,000 over a 3-year period per each new employee and offers a 5-year carry forward provision for any unused tax credits. Eligibility qualifications are different for rural and metro areas.

 **Bonds Administered by the Arizona Commerce Authority.**

 **Federal Programs**


 **Pollution Control Tax Credit** - Provides a 10 percent income tax credit on the purchase price of real or personal property used to control or prevent pollution.


 **Renewable Energy Production Tax Credit** - An income tax credit awarded to utility-scale generation systems based on the amount of electricity produced annually for a 10-year period using solar or wind energy. Questions can be directed to Georganna Meyer (602-716-6927) or Elaine Smith (602-716-6924).

 **Sales Tax Exemption for Machinery and Equipment** - Exemptions are available for:

1. Machinery or equipment used directly in manufacturing, see ARS 42-5159(B)(1).
2. Machinery, equipment or transmission lines used directly in producing or transmitting electrical power, but not including distribution, see ARS 42-5159(B)(4).
3. Machinery or equipment used in research and development, see ARS 42-5159(B)(14).

Questions can be directed to Christie Comanita (602-716-6791).

 **Solar Liquid Fuel Tax Credit** - Income tax credits are available for research and development, production and delivery system costs associated with solar liquid fuel. Questions can be directed to Georganna Meyer (602-716-6927) or Elaine Smith (602-716-6924).

 **Database of State Incentives for Renewables and Efficiency (DSIRE)**

- [Arizona Incentives/Policies](#)
- [Federal Incentives/Policies](#)
- [Solar Policy News](#) - DSIRE provides summaries of current solar policy developments and an archive of past solar policy developments. Current solar news appears below the news archive, which is searchable by several criteria.













GRANTS

The following solicitations are now available:
(Click on title to view solicitation)

- **NEW!** [Southern and Central Arizona Aerospace & Defense Region - 2013 Energy Reduction Challenge Grant Competition](#)
- [U.S. Dept. of Agriculture - Rural Development Grant Assistance](#)
- [FY2013 Economic Development Assistance Programs – Response due quarterly; September 13, 2013](#)
- [Solar, Heliospheric, and INterplanetary Environment – Response due August 21, 2013](#)
- [Clean Energy Manufacturing Innovation Institute – Response due August 29, 2013](#)
- [Water Sustainability and Climate - Responses due September 10, 2013](#)
- [Concentrating Solar Power: Efficiently Leveraging Equilibrium Mechanisms for Engineering New Thermochemical Storage \(CSP: ELEMENTS\) - Response due August 21, 2013](#)
- [Clean Energy Manufacturing Innovation Institute- Response due August, 29, 2013](#)
- [Bio-refinery Assistance Program – Response due October 31, 2013](#)
- [Energy, Power, and Adaptive Systems – Response due November 1, 2013](#)
- [Electronics, Photonics, and magnetic Devices - Response due November 1, 2013](#)
- [SunShot Initiative - Responses due November 20, 2014](#)
- [Solid Waste Management Grant - Response due December 31, 2013](#)
- [Environmental Sustainability - Response due February 20, 2014](#)
- [Energy for Sustainability - Response due February 20, 2014](#)
- [Environmental Health and Safety of Nanotechnology - Response due February 20, 2014](#)
- [Particulate and Multiphase Processes- Response due February 20, 2014](#)
- [Thermal Transport Processes - Response due February 20, 2014](#)
- [SunShot "Race to the Roof" Initiative - Registration due October 31, 2014](#)
- [Repowering Assistance Program – Ongoing](#)
- [Rural Business Enterprise Grants– Ongoing](#)
- [Rural Business Opportunity Grants– Ongoing](#)
- [Renewable Energy RFPs - Solicitations for Renewable Energy Generation, Renewable Energy Certificates, and Green Power – Various Deadlines](#)

ENERGY-RELATED EVENTS

- **NEW!** [Algal Culture Management and Strain Selection Workshop](#)
August 19-20, 2013 The University of Texas at Austin Austin, TX

-  **NEW! 2013 Tribal Lands and Environment Forum**
August 19-22, 2013 Santa Ana Pueblo, NM
-  **Waste Conversion Technology Conference & Trade Show,**
September 15-17, 2013 San Diego, CA
-  **NASEO 2013 Annual Meeting**
September 15-18 Denver, CO
-  **2013 SolarPACES**
September 17-20, 2013 Las Vegas, NV
-  **GEA Geothermal Energy Expo 2013**
September 29-October 2 Las Vegas, NV
-  **Solar Decathlon 2013**
Oct. 3-13, 2013 Irvine, CA
-  **IGSHPA Conference & Expo**
October 9-10, 2013 Las Vegas, NV
-  **AWEA Wind Energy Fall Symposium**
November 6-8 Colorado Springs, CO
-  **GreenBuild International Conference and Expo**
November 20-22 Philadelphia, PA
-  **Ecobuild America 2013**
December 9-13 Washington, D.C.
-  **Green Biz Forum 2014**
February 18-20, 2014 Phoenix, AZ
-  **Green Building Lecture Series**
Granite Reef Senior Center Scottsdale, AZ